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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
WANG, ALBERT C	

ART UNIT	PAPER NUMBER
2115	

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/762,932	DISSER, ROBERT J.	
	Examiner	Art Unit	
	Albert Wang	2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8-10,12-15 and 17-23* is/are rejected.

7)☒ Claim(s) *6,7,11 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Original claims 1-23 are pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the difference between "a first communication controller" in claim 2 and "a first communication controller" in claim 8.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-5, 8-10, 12-15, and 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neudecker, U.S. Patent No. 6,282,668, in view of Hanf et al., U.S. Patent No. 6,405,330 ("Hanf").

As per claim 1, Neudecker teaches a controller area network, comprising:

a CAN bus operable to facilitate CAN communications (fig. 1, data bus 8; col. 1, lines 11-25);

a plurality of communication controllers in electrical communication with said CAN bus (fig. 1, bus stations 1-4),

wherein each communication controller is operable in an active state to participate in CAN communications among said plurality of communication controllers via said CAN bus (col. 1, line 54 – col. 2, line 2), and

wherein each communication controller is inoperable in an inactive state to participate in CAN communications among said plurality of communication controllers via said CAN bus (col. 1, line 54 – col. 2, line 2); and

a CAN wake-up controller in electrical communication with said CAN bus and at least one of said communication controllers (col. 4, lines 35-48),

wherein said CAN wake-up controller is operable to switch said at least one of said communication controllers to the active state in response to an application of a non-interfering communication biasing signal to said CAN bus (col. 4, lines 35-48), and

wherein said CAN wake-up controller is operable to switch said at least one of said communication controllers to the inactive state in response to a termination of the application of the non-interfering communication biasing signal to said CAN bus (col. 4, lines 49-58).

However, Neudecker does not teach the communication biasing signal to be non-interfering. Hanf teaches that it is standard practice to keep communication signal levels on bus systems to be within certain tolerance windows so that the communication signals are non-

interfering (col. 2, lines 53-67). At the time of the invention, it would have been obvious to one of ordinary skill in the art to apply Hanf's maintaining non-interfering signal levels to Neudecker's method, so as to avoid unintended bus activity.

As per claim 2, Neudecker teaches said plurality of communication controllers includes a first communication controller operable to apply the non-interfering communication biasing signal to said CAN bus (col. 3, lines 57-65).

As per claim 3, Neudecker teaches wherein said first communication controller is operable to receive an electrical communication of a wake-up signal indicative of a requirement to switch the first communication controller to the active state (col. 3, line 65 – col. 4, line 2).

As per claim 4, Neudecker teaches wherein said first communication controller includes: a processing module operable to be switched to the active state in response to the wake-up signal being electrically communicated to said first communication controller, wherein said processing module generates an enable signal in response to being switched to the active state; and a transceiver module operable to be switched to the active state in response to a generation of the enable signal by said processing module, wherein said transceiver module generates the non-interfering communication biasing signal in response to being switched to the active state (col. 3, line 57 – col. 4, line 2).

As per claim 5, Neudecker teaches wherein said processing module includes a microprocessor operable in the active state to implement at least one CAN communication technique for facilitating a participation by said first communication controller in CAN communications among said plurality of communication controllers via said CAN bus (col. 1, lines 11-25).

As per claim 8, Neudecker teaches wherein said first communication controller is operable to receive a wake-up signal indicative of a requirement to switch said first communication controller to the active state (col. 3, line 65 – col. 4, line 2).

As per claim 9, Neudecker teaches wherein said first communication controller includes: a processing module operable to be switched to the active state in response to the wake-up signal being electrically communicated to said first communication controller, wherein said processing module generates an enable signal in response to being switched to the active state; and a transceiver module operable to be switched to the active state in response to a generation of the enable signal by said processing module (col. 3, line 57 – col. 4, line 2).

As per claim 10, Neudecker teaches wherein said processing module includes a microprocessor operable in the active state to implement at least one CAN communication technique for facilitating a participation by said first communication controller in CAN communications among said plurality of communication controllers via said CAN bus (col. 1, lines 11-25).

As per claim 12, Neudecker teaches wherein said CAN wake-up controller includes: a bias signal detection module operable to detect the application of the non-interfering communication biasing signal to said CAN bus; and a wake-up switch module operable to generate a wake-up signal in response to a detection by said bias signal detection module of the application of the non-interfering communication biasing signal to said CAN bus (fig. 2; col. 5, lines 3-43).

As per claim 13, Neudecker teaches wherein a first communication controller is operable to receive an electrical communication from said CAN wake-up controller of the wake-up signal

indicative of a requirement to switch the first communication controller to the active state (col. 3, line 65 – col. 4, line 2).

As per claim 14, Neudecker teaches wherein said first communication controller includes: a processing module operable to be switched to the active state in response to the wake-up signal being electrically communicated to said first communication controller, wherein said processing module generates an enable signal in response to being switched to the active state; and a transceiver module operable to be switched to the active state in response to a generation of the enable signal by said processing module (col. 3, line 57 – col. 4, line 2).

As per claim 15, Neudecker teaches wherein said processing module includes a microprocessor operable in the active state to implement at least one CAN communication technique for facilitating a participation by said first communication controller in CAN communications among said plurality of communication controllers via said CAN bus (col. 1, lines 11-25).

As per claim 17, Neudecker teaches wherein said wake-up switch module includes a wake-up electronic switch operable to apply at least a portion of a voltage source as the wake-up signal to a first communication controller in response to a detection by said bias signal detection module of the application of the non-interfering communication biasing signal to said CAN bus (col. 5, lines 3-43).

As per claim 18, Neudecker teaches a method of operating a controller area network employing a plurality of communication controllers and a CAN bus (fig. 1, bus stations 1-4 and data bus 8; col. 1, lines 11-25), the method comprising:

applying a communication biasing signal to the CAN bus (col. 3, lines 57-65); and

switching a first communication controller to an active state in response to the application of the communication biasing signal to the CAN bus (col. 4, lines 35-48),

wherein the first communication controller switches to an active state to thereby participate in CAN communications among the plurality of communication controllers via said CAN bus (col. 4, lines 35-48).

However, Neudecker does not teach the communication biasing signal to be non-interfering. Hanf teaches that it is standard practice to keep communication signal levels on bus systems to be within certain tolerance windows so that the communication signals are non-interfering (col. 2, lines 53-67). At the time of the invention, it would have been obvious to one of ordinary skill in the art to apply Hanf's maintaining non-interfering signal levels to Neudecker's method, so as to avoid unintended bus activity.

As per claim 19, Neudecker teaches the method further comprising:

receiving an electrical communication of a wake-up signal indicative of a requirement for the first communication controller to be switched to the active state (col. 3, line 65 – col. 4, line 2); and

switching a second communication controller to the active state in response to the electrical communication of the wake-up signal whereby the second communication controller generates the non-interfering communication biasing signal in response being switched to the active state (col. 3, line 65 – col. 4, line 15).

As per claim 20, Neudecker teaches the method further comprising:

detecting the application of the non-interfering communication biasing signal to the CAN bus (col. 4, lines 35-48); and

generating a wake-up signal in response to the detection of the application of the non-interfering communication biasing signal to the CAN bus, the wake-up signal being indicative of a requirement for the first communication controller to be switched to the active state (col. 4, lines 35-48).

As per claims 21-23, since Neudecker/Hanf teaches the method of claims 18-20, Neudecker/Hanf teaches the claimed network.

Allowable Subject Matter

5. Claims 6, 7, 11 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert Wang whose telephone number is 571-272-3669. The examiner can normally be reached on M-F (9:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AW

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